

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017296**Date Inspected:** 28-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspector: ZPMC: Mr. Liu Hua Jie

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Segment Trial Assembly

ZPMC issued "Inspection Notification Sheet" number 06791 informing Caltrans QA that ZPMC is requesting ultrasonic inspections (UT) of the complete joint penetration counterweight attachment plate welds OBW10L-003, -004, 005 and -006 in support of "Tagging in Process". These welds are located on OBG segments 10AW and 10BW edge plates. This QA Inspector performed random visual and ultrasonic inspections of approximately 10% length of areas previously tested by ZPMC personnel and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see this QA Inspector's TL6027 Ultrasonic Test Report.

This QA Inspector observed ZPMC welder Mr. Liu Ya Hui stencil 040275 used shielded metal arc process to make temporary alignment plate tack welds between OBG segment 11AW and 11BW top deck plates. This QA Inspector observed Liu Ya Hui appeared to be certified to perform this welding and a welding current of approximately 170 amps. The welding electrodes were stored in a portable rod oven which was not connected to

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

an electric power cord and the electrodes felt cold. This QA Inspector informed ZPMC CWI Mr. Liu Hua Jie that the electrodes appeared to be cold and Mr. Liu Ya Hui removed the electrode storage oven containing the cold electrodes and he returned the electrode oven containing heated electrodes. Items observed on this date do not fully appear to comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xue Fu Tai stencil 500674 used shielded metal arc process to make temporary alignment plate tack welds between cross beam CB14 stiffener plates and OBG segment 11CE top deck stiffener plates. This QA Inspector observed Mr. Xue Fu Tai appeared to be certified to perform this welding and the welding electrodes were being stored in a portable rod oven which was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Huang Zhao, stencil 056200 used shielded metal arc procedure WPS-B-P-2114-FCM-1 to weld OBG cross beam deck plate stiffener hold back welds DP203-013-015~-028 and DP204-013-005~-008 adjacent to cross beam CB13 stiffener plates. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded a welding current of 151 amps and Mr. Huang Zhao appeared to be certified to make these welds. This QA Inspector measured a welding current of approximately 190 amps and the WPS lists a maximum welding current of 160 amps. This QA Inspector informed ZPMC CWI Mr. Liu Hua Jie that the welding current appears to be approximately 30 amps above the maximum listed in the WPS and Mr. Liu Hua Jie had the welder adjust the welding machine to approximately 150 amps. Items observed on this date did not appear to fully comply with applicable contract documents.

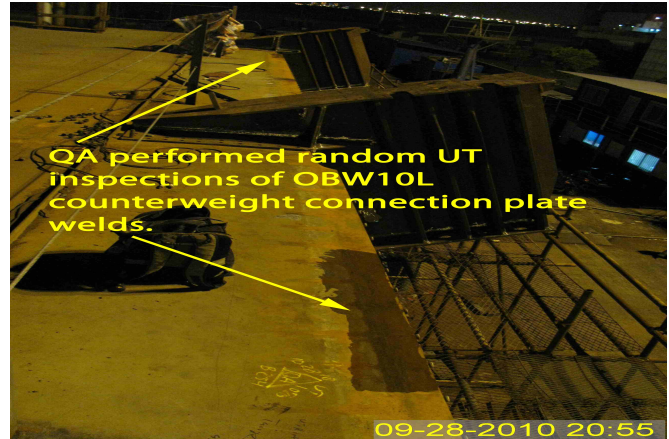
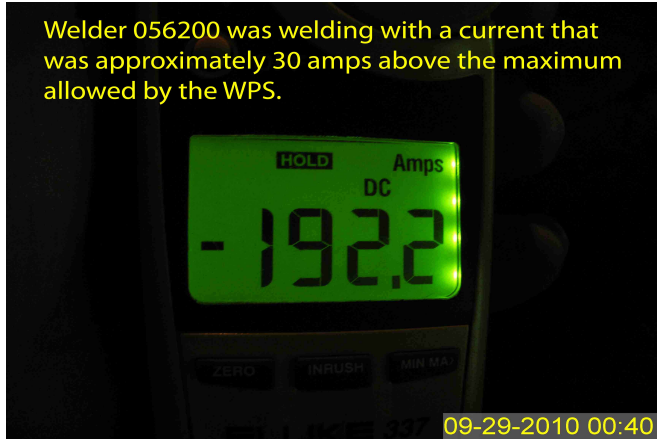
This QA Inspector observed ZPMC welder Mr. Tang Yung, stencil 052493 used shielded metal arc procedure WPS-B-P-2114-FCM-1 to weld OBG cross beam deck plate DP203-013-29~-42 and DP205-013-09~-12 stiffener hold back welds adjacent to cross beam CB13 stiffener plates. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded a welding current of 148 amps and Mr. Tang Yung appeared to be certified to make these welds. This QA Inspector measured a welding current of approximately 155 amps. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Sun Guang Ping, stencil 050289 used shielded metal arc procedure WPS-B-P-2114-FCM-1 to weld OBG cross beam deck plate DP201-013 -009~-016 and DP202-013-015~-028 stiffener hold back welds adjacent to cross beam CB13 stiffener plates. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded a welding current of 150 amps and Mr. Sun Guang Ping appeared to be certified to make these welds. This QA Inspector measured a welding current of approximately 160 amps. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Ye Xulan, stencil 040581 used shielded metal arc procedure WPS-B-P-2114-FCM-1 to weld OBG cross beam deck plate DP201-013 -017~-024 and DP202-013-029~-042 stiffener hold back welds adjacent to cross beam CB13 stiffener plates. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded a welding current of 152 amps and Ms. Ye Xulan appeared to be certified to make these welds. This QA Inspector measured a welding current of approximately 155 amps. Items observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
